



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,544	03/29/2004	Thomas E. Stirling	2925.WHI.PT	2246
26986 7590 01/23/2008 MORRISS OBRYANT COMPAGNI, P.C. 734 EAST 200 SOUTH SALT LAKE CITY, UT 84102			EXAMINER BERTHEAUD, PETER JOHN	
			ART UNIT 3746	PAPER NUMBER
			MAIL DATE 01/23/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/811,544

Applicant(s)

STIRLING ET AL.

Examiner

Peter J. Bertheaud

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 June 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/19/2007 has been entered. It is noted that claims 1, 4, 5, 9, 13, 16, and 17 have been amended.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-5 and 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hawes 5,529,462 i.v., Hofstad 4,902,204, in view of Back 3,771,915 and further in view of McEwen 5,030,346.

Hawes (Fig. 4) discloses a submersible pump having a pump inlet 36 and a pump discharge outlet 20; a pump distribution plate 26 for positioning near the floor of a sump pit or tank, said pump distribution plate 26 formed of a substantially linear plate portion of material having a top surface and a bottom surface; at least one opening 34

through said linear plate portion sized to receive the inlet 36 of a pump for receiving said pump inlet and having a bottom surface for orientation toward the floor of a sump pit or tank, and having leg members 38 extending from said bottom surface sized to position said pump inlet away from the floor of a sump pit or tank. Hawes further discloses that the pump inlet is sized for receipt in said at least one opening. Hawes fails to disclose the following claimed limitations taught by Hofstad.

Hofstad teaches a vertical submersible pump assembly comprising a pump inlet (see col. 1, lines 67-68), and a base housing 8 with a plurality of guide members extending therefrom on which the pump is mounted on. Hofstad further teaches that the guide members are arranged in relation to the pump inlet in such a way that they are positioning the pump inlet away from the floor of a sump pit or tank, and furthermore are capable of facilitating solids entrainment by direction of fluid and solids toward the pump inlet opening (see fins on bottom of pump in Fig. 1 and 3 that lead to the pump inlet opening).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pump assembly of Hawes, by implementing guide members on the bottom surface of the distribution plate so as to facilitate solids entrainment by the submersible pump (Hofstad, Fig. 1 and col. 1, lines 63-68).

Hawes in view of Hofstad discloses the invention as discussed above. However, Hawes in view of Hofstad fails to disclose the following claimed limitations taught by Back.

Back teaches a submersible pump comprising a pump P, a discharge outlet 14 structured for connection to a stationary discharge pipe 10, 12 opening located near the floor of a sump pit or tank. Back further teaches that the discharge piping has an angled opening (see configuration in Fig. 7) and a disconnect system comprising an angled face 69 surrounding said pump discharge outlet for assuring mating and sealing of said pump discharge outlet to said angled opening of said discharge piping. Back also teaches a discharge elbow stand 44, 18 configured with said angled opening, and secured to the base plate 20 and said discharge piping 10,12.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pump assembly of Hawes in view of Hofstad, by angling the discharge outlet and piping in order to guide the discharge outlet to sealingly engage the discharge piping (Back, col. 4, lines 47-50).

Hawes i.v., Hofstad and in view of Back discloses the invention as discussed above. However, Hawes i.v., Hofstad in view of Back fails to disclose the following claimed limitations taught by McEwen.

McEwen teaches a pump apparatus comprising a pump P, a discharge housing 42, and an inlet opening 68. McEwen further teaches a distribution plate 30 having at least one opening therethrough for receiving said pump inlet upon lowering of said submersible pump into a sump pit or tank in which said pump distribution plate is positioned; a centering member 44 surrounding each said at least one opening in said pump distribution plate 30 for receiving said pump inlet of said submersible pump in centered registration therewith; and the distribution plate 30 having a guide rail system

(see 102) connected thereto. In reference to claims 8-11: McEwen (Fig. 9) teaches a pump apparatus comprising a pump Pc, discharge piping 140, 36c, 38c, and an inlet opening 131. McEwen further teaches that the pump has a pump casing having a suction side (see Hc), comprising a suction head plate 138 positioned between said suction side of said pump and said at least one opening of a pump distribution plate 30c, said pump inlet being formed in said suction head plate. McEwen also teaches a centering member 44c positioned in said at least one opening in said pump distribution plate 30c, said centering member being configured to receive said pump inlet 131 of said suction head plate 138. McEwen further teaches that the centering member 44c has an angled inner surface 54, and said pump inlet of said suction head plate has an outer angled surface, for guiding said pump inlet into said centering member along said angled inner surface of said centering member (see Fig. 9 and col. 12, lines 64-68). Although it is not specifically disclosed in McEwen, it would have been obvious to provide said pump inlet with a sealing ring to create a sealing engagement of said pump inlet with said centering member 44 because in Figure 4 of McEwen there is a sealing ring 84 disposed between the pump and the outlet piping in order to prevent the working fluid from escaping. Therefore, it would have been obvious to place an additional seal between the pump inlet and the centering member for the same purpose. Furthermore, it is well known in the art to provide sealing rings between elements that are involved with fluid transfer.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pump assembly of Hawes i.v.,

Hofstad in view of Back, by implementing a centering member in order to receive and mount the inlet of the pump in slip-fit relation (McEwen, col. 10, lines 25-29).

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hawes 5,529,462 i.v., Hofstad 4,902,204 i.v., Back 3,771,915 and in view of McEwen 5,030,346 and in further view of Englesson 3,018,925.

Hawes i.v., Hofstad i.v., Back in view of McEwen disclose the invention as discussed above. However, Hawes i.v., Hofstad i.v., Back in view of McEwen disclose do not teach the following claimed limitations taught by Englesson.

Englesson (Fig. 5) teaches a submersible pump with an inlet 13, a discharge outlet 14, and a discharge elbow stand (see 30). Englesson further teaches a guide rail system with rail 29 a guide rail bracket 33 connected to said submersible pump 10.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pump assembly of Hawes i.v., Hofstad i.v., Back in view of McEwen disclose, by implementing a guide bracket connected to the submersible pump in order to support the pump unit when it is being raised and lowered on the rail (Englesson, col. 3, lines 17-21).

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hawes 5,529,462 i.v., Hofstad 4,902,204 i.v., Back 3,771,915 in view of Englesson 3,427,982.

Hawes i.v., Hofstad in view of Back and in further view of McEwen disclose the invention as discussed above. However, Hawes i.v., Hofstad in view of Back and in further view of McEwen fail to disclose the following claimed limitations taught by Englesson.

Engleson (Fig. 5) teaches a submersible pump with an inlet 14, a discharge outlet 16, and a discharge elbow stand 23. Engleson further teaches a guide rail system with rails 22, a guide rail bracket 28, connected to the discharge elbow stand 23 and positioned to guide movement of said submersible pump into and out of a well or tank.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pump assembly of Hawes i.v., Hofstad in view of Back and further view of McEwen, by connecting the guide rail system to the discharge elbow stand in order to save space by having them on a common base plate (Engleson, col. 3, lines 13-18).

5. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hawes 5,529,462 i.v., Hofstad 4,902,204 i.v., Back 3,771,915 and in view of McEwen 5,030,346 and in further view of Oakes 4,308,00.

Hawes i.v., Hofstad i.v., Back in view of McEwen disclose the invention as discussed above. However, Hawes i.v., Hofstad i.v., Back in view of McEwen do not disclose the following claimed limitations taught by Oakes.

Oakes teaches a submersible pump comprising a pump 5, a guide rail assembly 13, and a discharge outlet 12 connected to discharge piping 7, 8. Oakes further teaches that the face of said pump discharge outlet is configured to retain a discharge seal ring 44 positioned thereabout for sealing against said opening of said discharge piping 7.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pump assembly of Hawes i.v.,

Hofstad i.v., Back in view of McEwen, by implementing a seal ring in the angled face of the discharge outlet in order to seal the gap between the outlet and the piping (Back, col. 6, lines 41-45).

6. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hawes 5,529,462 in view of Hofstad 4,902,204, and in further view of McEwen 5,030,346.

Hawes (Fig. 4) discloses a submersible pump having an pump inlet 36 and a pump discharge outlet 20; a pump distribution plate 26 for positioning near the floor of a sump pit or tank, said pump distribution plate 26 formed of a substantially linear plate portion of material having a top surface and a bottom surface; at least one opening 34 through said linear plate portion sized to receive the inlet 36 of a pump for receiving said pump inlet and having a bottom surface for orientation toward the floor of a sump pit or tank, and having leg members 38 extending from said bottom surface sized to position said pump inlet away from the floor of a sump pit or tank. Hawes further discloses that the pump inlet is sized for receipt in said at least one opening. Hawes fails to disclose the following claimed limitations taught by Hofstad and McEwen.

Hofstad teaches a vertical submersible pump assembly comprising a pump inlet (see col. 1, lines 67-68), and a base housing 8 with a plurality of guide members extending therefrom on which the pump is mounted on. Hofstad further teaches that the guide members are arranged in relation to the pump inlet in such a way that they are positioning the pump inlet away from the floor of a sump pit or tank, and furthermore are capable of facilitating solids entrainment by the submersible pump (see fins on bottom of pump in Fig. 1).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pump assembly of Hawes, by implementing guide members on the bottom surface of the distribution plate so as to facilitate solids entrainment by the submersible pump (Hofstad, Fig. 1 and col. 1, lines 63-68).

McEwen teaches a pump apparatus comprising a pump P, a discharge housing 42, and an inlet opening 68. McEwen further teaches a distribution plate 30 having at least one opening therethrough for receiving said pump inlet upon lowering of said submersible pump into a sump pit or tank in which said pump distribution plate is positioned; and a centering member 44 surrounding each said at least one opening in said pump distribution plate 30 for receiving said pump inlet of said submersible pump in centered registration therewith. Although it is not specifically disclosed in McEwen, it would have been obvious to provide said pump inlet with a sealing ring to create a sealing engagement of said pump inlet with said centering member 44 because in Figure 4 of McEwen there is a sealing ring 84 disposed between the pump and the outlet piping in order to prevent the working fluid from escaping. Therefore, it would have been obvious to place an additional seal between the pump inlet and the centering member for the same purpose. Furthermore, it is well known in the art to provide sealing rings between elements that are involved with fluid transfer.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pump assembly of Hawes i.v.,

Hofstad, by implementing a centering member in order to receive and mount the inlet of the pump in slip-fit relation (McEwen, col. 10, lines 25-29).

7. Claims 14, 15, and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hawes 5,529,462 in view of Hofstad 4,902,204, in view of McEwen 5,030,346, and in further view of Back 3,771,915.

Hawes in view of Hofstad discloses the invention as discussed above. However, Hawes in view of Hofstad fails to disclose the following claimed limitations taught by Back.

Back teaches a submersible pump comprising a pump P, a discharge outlet 14 and discharge piping 10, 12. Back further teaches that the discharge piping has an angled opening (see configuration in Fig. 7) and a disconnect system comprising an angled face 69 surrounding said pump discharge outlet for assuring mating and sealing of said pump discharge outlet to said angled opening of said discharge piping. Back also teaches a discharge elbow stand 44, 18 configured with said angled opening, and secured to the base plate 20 and said discharge piping 10,12.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pump assembly of Hawes in view of Hofstad in view of McEwen, by angling the discharge outlet and piping in order to guide the discharge outlet to sealingly engage the discharge piping (Back, col. 4, lines 47-50).

8. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Engleson 3,018,925 in view of McEwen 5,030,346.

Engleson discloses a submersible pump having a vertical disconnection system for drop in and lift out of the pump from a sump pit, well or tank, comprising; a submersible pump 10 having a central axis, a pump inlet 13 and a pump discharge outlet (see 15), and having a guide rail bracket 6, 33 for sliding engagement with a guide rail system 5, 29, said pump discharge outlet having an angled face (see 15 in Figs. 1, 2, 4, and 5) surrounding a discharge opening, the slope of said angled face being directed inwardly toward said central axis in the direction of said pump inlet (see Figs. 1, 2, 4, and 5) at the point of said angled face which is in closest proximity to said pump outlet, said angled face being distance from and unsupported by said guide rail bracket. However, Engleson does not teach the following claimed limitations taught by McEwen.

McEwen teaches a pump apparatus comprising a pump P, a discharge housing 42, and an inlet opening 68. McEwen further teaches a distribution plate 30 having at least one opening therethrough for receiving said pump inlet upon lowering of said submersible pump into a sump pit or tank in which said pump distribution plate is positioned; and a centering member 44 surrounding each said at least one opening in said pump distribution plate 30 for receiving said pump inlet of said submersible pump in centered registration therewith. Although it is not specifically disclosed in McEwen, it would have been obvious to provide said pump inlet with a sealing ring to create a sealing engagement of said pump inlet with said centering member 44 because in Figure 4 of McEwen there is a sealing ring 84 disposed between the pump and the outlet piping in order to prevent the working fluid from escaping. Therefore, it would

have been obvious to place an additional seal between the pump inlet and the centering member for the same purpose. Furthermore, it is well known in the art to provide sealing rings between elements that are involved with fluid transfer.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pump assembly of Englesson, by implementing a centering member on a distribution plate in order to receive and better stabilize the pump in its mounting.

9. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Englesson 3,018,925 in view of McEwen 5,030,346.

Englesson in view of McEwen discloses the general conditions of the claimed invention except for the express disclosure that the angles face is between about five and about forty-five degrees to the central axis. It would have been obvious to one having ordinary skill in the art at the time the invention was made to angle the face of the discharge outlet between five and forty-five degrees, since the claimed values are merely an optimum or workable range. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) (see MPEP 2144.05 II - Optimization of Ranges).

10. Claims 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Englesson 3,018,925 in view of McEwen 5,030,346, in view of Oakes 4,308,00.

Englesson in view of McEwen discloses the invention as discussed above.

However, Englesson in view of McEwen does not teach the following claimed limitations taught by Oakes

Oakes teaches a submersible pump comprising a pump 5, a guide rail assembly 13, 20, and a discharge outlet 12 connected to discharge piping 7, 8. Oakes further teaches that the face of said pump discharge outlet 12 is configured to retain a discharge seal ring 44; and wherein the face is positioned on a discharge adaptor 31 which is further configured with a contact surface for contacting said discharge outlet of said submersible pump, said discharge adaptor being distanced from and unsupported by said guide rail bracket 20.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the pump assembly of Englesson in view of McEwen by implementing a seal ring in the angled face of the discharge outlet in order to seal the gap between the outlet and the piping (Oakes, col. 6, lines 41-45) and by implementing the angled face of Englesson on a discharge adaptor 31 in order to better connect the discharge piping to the pump (Oakes, col. 5, line 55 – col. 6, line 18).

Response to Arguments

11. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection. Examiner would like to point out that due to the extreme similarity of structure and function of the above cited references, it is clearly obvious to modify various elements of one of the inventions with elements of

another. The motivation to combine has been stated in the 103 rejections and Examiner maintains that these combinations are proper.

Conclusion

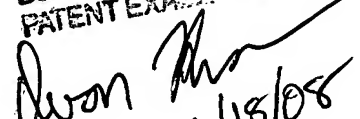
12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J. Bertheaud whose telephone number is (571) 272-3476. The examiner can normally be reached on M-F 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Devon Kramer can be reached on (571) 272-7118. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


PJB

DEVON C. KRAMER
PATENT EXAMINER


1/15/08